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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/814,082	03/10/1997	MASANORI TAKAHASHI	684.2465	4251

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EXAMINER

NGO, HUYEN LE

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 02/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.	Applicant(s)	
08/814,082	TAKAHASHI ET AL.	
Examiner	Art Unit	
Julie-Huyen L. Ngo	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1) Responsive to communication(s) filed on \_\_\_\_ .

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

4) Claim(s) 1-3,7,13,14 and 18 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_ is/are allowed.

6) Claim(s) 1-3,7,13,14 and 18 is/are rejected.

7) Claim(s) \_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_ .
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ .	6) <input type="checkbox"/> Other: ____ .

## **DETAILED ACTION**

### ***Continued Prosecution Application***

The request filed on June 11, 2002 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/814,082 is acceptable and a CPA has been established.

Applicant's submission filed on May 9, 2002 has been entered and an action on the CPA follows.

### ***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The abstract of the disclosure is objected to because it does not clearly states what is new in the art to which the invention pertains.

Correction is required. See MPEP § 608.01(b)

### ***Claim Objections***

Claims 1- 3, and 7 are objected to because of the following informalities:

In lines 1-2 of claim 1, the recitation "a first substrate forming a display panel" is an improper recitation since the substrate does not form the display panel but is a part of the display device.

Claims not specifically discussed above are objected to as bearing the defect(s) of the claim(s) from which they depend.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7, 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted Prior Art (APA).

As to claims 1, 2 and 13, Applicant's admitted prior art discloses, in figure 13, a display apparatus or a circuit connection structure comprising:

- a first substrate (1bp) having electrode terminals (12p) formed thereon
- a semiconductor device having first/output electrodes (15p) and second/input electrodes (15p); with the first electrodes/output electrodes connected to the electrode terminals (12p) formed on said first substrate
- a flexible wiring member (4ap) having thereon a pattern of conductors (17), each conductor extending from a first conductive end to a second conductive end on the flexible wiring member with the first conductive ends of the conductors connected to the second/input electrodes of the semiconductor device (5p); and

- a circuit board (3p) disposed with a space from the first substrate (1bp) and connected to the second conductive ends of the conductors (17) on the flexible wiring member (4ap),

wherein said semiconductor device (4ap+5p+4ap) bridges the space between the first substrate (1bp) and the circuit board (3p).

Although the circuit board (3p) in the APA device does not show electrode terminals connected to the conductors' second conductive ends, it is well known in the art for a circuit board to have electrode terminals formed thereon for making electrical contacts between a circuit board and any other circuit boards, e.g., a flexible wiring member or any other connecting boards.

Therefore, it would have been obvious for one of ordinary skill in the art to expect that there are electrode terminals on the circuit board (3p) of the APA device, and to connect the conductors' second conductive ends to the circuit board's electrode terminals for making electrical contacts between the circuit board (3p) and the flexible wiring member (4ap) in the APA device.

As to claims 3 and 14, it is well known and conventional in the art to connect the electrode terminals of different panels/boards, e.g., a flexible tape carrier package (FTC) and driver circuit board or Printed Circuit Board (PCB) to each other by tape-automated bonding method (admitted by Applicant on page 1, line 25).

Therefore, it would have been obvious for one of ordinary skill in the art to realize that the semiconductor device (5p)'s second electrodes (15p) are connected to the first

conductor ends of conductors (17) on a flexible wiring member (4ap) by tape-automated bonding method.

As to claims 7 and 18, the connecting part between the second electrodes (15p) of the semiconductor device (5p) and the first conductor ends of the conductors on the flexible wiring member (4ap) is sealed with a resin (16p). See figure 13.

#### ***Response to Remarks***

Applicant's argument filed on May 9, 2002 (paper no. 24) has been fully considered but they are not persuasive.

In response to Applicant's remarks with respect to figure 13 of APA device and the deficiencies in Kishigami and Hirai references regarding the feature "wherein said semiconductor device bridges the space between the first substrate and the circuit board,"

Applicant is to note that this feature is clearly showed in figure 13 of APA device with the semiconductor device, which includes elements 4ap+5p+4ap, bridging the space between the first substrate (1bp) and the circuit board (3p). The Kishigami and Hirai references are no longer applied in this Office action since claims 4 and 15 have been canceled.

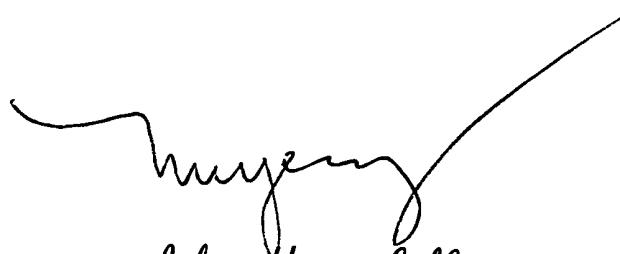
#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Julie-Huyen L. Ngo whose telephone number is (703) 305-3508. The Examiner can normally be reached on T-Friday.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. Robert H. Kim can be reached at (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-4709 for regular communications and (703) 746-4709 for After Final communications. Please contact the Examiner before faxing any paper to the Office.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

February 2, 2003



Julie-Huyen L. Ngo

**Patent Examiner  
Art Unit 2871**